Listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (currently amended): A molecule of the structure **A – X – B**, wherein

B is a peptide portion of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake,

A is a peptide portion of about 2 to about 20 acidic amino acid residues, which when linked with portion **B** is effective to inhibit ~~or prevent~~ cellular uptake of portion **B**, and

X is a linker of about 2 to about 100 atoms joining **A** with **B**, which can be cleaved under physiological conditions, wherein **X** comprises the sequence of SEQ ID NO: 1.

2 (original): The molecule of claim 1, wherein said peptide portion **A** comprises about 5 to about 9 glutamates or aspartates.

3 (original): The molecule of claim 2, wherein said peptide portion **A** comprises about 5 to about 9 consecutive glutamates or aspartates.

4 (original): The molecule of claim 1, wherein said peptide portion **B** comprises about 9 to about 16 arginines.

5 (original): The molecule of claim 4, wherein said peptide portion **B** comprises about 9 to about 16 consecutive arginines.

6 (original): The molecule of claim 1, wherein said peptide portion **A** comprises D-amino acids.

7 (original): The molecule of claim 1, wherein said peptide portion **B** comprises D-amino acids.

8 (original): The molecule of claim 1, wherein said peptide portion **A** consists of D-amino acids.

9 (original): The molecule of claim 1, wherein said peptide portion **B** consists of D-amino acids.

10 (original): The molecule of claim 1, wherein said peptide portions **A** and **B** consists of D-amino acids.

11 (currently amended): A molecule for transporting a cargo moiety across a cell membrane of the structure **A – X – B – C**, wherein

C is a portion comprising a cargo moiety,

B is a peptide portion of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake, is covalently linked to portion **C**, and is effective to enhance transport of cargo portion **C** across a cell membrane,

A is a peptide portion of about 2 to about 20 acidic amino acid residues, which when linked with portion **B** is effective to inhibit ~~or prevent~~ cellular uptake of **B - C** , and

X is a cleavable linker of about 2 to about 100 atoms joining **A** with **B – C**, which can be cleaved under physiological conditions, wherein **X** comprises the sequence of SEQ ID NO: 1.

12 (original): The molecule of claim 11, wherein said peptide portion **A** comprises amino acids selected from the group of acidic amino acids consisting of glutamate and aspartate.

13 (original): The molecule of claim 11, wherein said peptide portion **B** comprises amino acids selected from the group of basic amino acids consisting of arginine and histidine.

14 (original): The molecule of claim 11, wherein said cargo portion **C** is selected from the group of cargo moieties consisting of a fluorescent moiety, a fluorescence-quenching

moiety, a radioactive moiety, a radiopaque moiety, a paramagnetic moiety, a nanoparticle, a vesicle, a molecular beacon, a marker, a marker enzyme, a contrast agent, a chemotherapeutic agent, and a radiation-sensitizer.

15 (original): The molecule of claim 14, wherein the cargo portion **C** comprises a contrast agent for diagnostic imaging.

16 (original): The molecule of claim 14, wherein the cargo portion **C** comprises a radiation sensitizer for radiation therapy.

17 (original): The molecule of claim 11, wherein said peptide portion **A** comprises about 5 to about 9 glutamates or aspartates.

18 (original): The molecule of claim 17, wherein said peptide portion **A** comprises about 5 to about 9 consecutive glutamates or aspartates.

19 (original): The molecule of claim 11, wherein said portion peptide **B** comprises between about 9 to about 16 arginines.

20 (original): The molecule of claim 19, wherein said peptide portion **B** comprises between about 9 to about 16 consecutive arginines.

21 (original): The molecule of claim 11, wherein said peptide portion **A** comprises D-amino acids.

22 (original): The molecule of claim 11, wherein said peptide portion **B** comprises D-amino acids.

23 (original): The molecule of claim 11, wherein said peptide portion **A** consists of D-amino acids.

24 (original): The molecule of claim 11, wherein said peptide portion **B** consists of D-amino acids.

25 (original): The molecule of claim 11, wherein said peptide portions **A** and **B** consist of D-amino acids.

26 (original): The molecule of claim 25, wherein said peptide portion **B** consists of D-arginine amino acids.

27 (original): The molecule of claim 11, wherein said peptide portion **A** is located at a terminus of a polypeptide chain comprising **B – C**.

28 (original): The molecule of claim 11, wherein said peptide portion **A** is located at the amino terminus of a polypeptide chain comprising **B – C**.

29 (original): The molecule of claim 11, wherein said peptide portion **A** is linked near to or at the amino terminus of a polypeptide chain comprising **B – C**.

30 (original): The molecule of claim 11, wherein said peptide portion **A** is linked near to or at the carboxy terminus of a polypeptide chain comprising **B – C**.

31 (original): The molecule of claim 11, wherein **B – C** comprises a polypeptide chain having ends consisting of a **B**-side terminus and a **C**-side terminus, and wherein cleavable linker **X** is disposed near or at said **B**-side terminus.

32 (original): The molecule of claim 11, wherein **B – C** comprises a polypeptide chain having ends consisting of a **B**-side terminus and a **C**-side terminus, and wherein cleavable linker **X** is disposed near or at said **C**-side terminus.

33-36 (canceled)

37 (original): The molecule of claim 11, wherein cleavable linker X comprises aminocaproic acid.

38-44 (canceled)

45 (original): The molecule of claim 11, comprising a plurality of cleavable linkers **X** linking a portion **A** to a structure **B – C**.

46 (currently amended): A pharmaceutical composition comprising:

A molecule of the structure **A – X – B**, wherein

B is a peptide portion of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake,

A is a peptide portion of about 2 to about 20 acidic amino acid residues, which when linked with portion **B** is effective to inhibit ~~or prevent~~ cellular uptake of portion **B**, and

X is a cleavable linker of about 3 to about 30 atoms joining **A** with **B**, which can be cleaved under physiological conditions, wherein **X** comprises the sequence of SEQ ID NO: 1; and

a pharmaceutically acceptable carrier.

47 (previously presented): The pharmaceutical composition of claim 46, wherein said portion **A** has between about 5 to about 9 acidic amino acid residues, and said portion **B** has between about 9 to about 16 basic amino acid residues.

48 (original): The pharmaceutical composition of claim 46 or 47, further comprising a portion **C** covalently attached to said portion **B** and comprising a cargo moiety.

49 (withdrawn): A method of modulating cellular uptake of a peptide **B** of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake, comprising:

linking said peptide **B** to a peptide **A** of about 2 to about 20 acidic amino acid residues with a cleavable linker **X** of about 3 to about 30 atoms, which can be cleaved under physiological conditions and

cleaving said cleavable linker **X** effective to separate peptide **B** from molecule **A**.

50 (withdrawn): A method of modulating cellular uptake of a cargo moiety **C**, comprising:

covalently attaching a cargo moiety **C** to a peptide **B** of about 5 to about 20 basic amino acid residues to form a molecule **B – C**;

linking said molecule **B – C** to a peptide **A** of about 2 to about 20 acidic amino acid residues with a cleavable linker **X** of about 3 to about 30 atoms, and

cleaving said cleavable linker **X** effective to separate **B – C** from said peptide **A**.

51 (withdrawn): A nucleic acid encoding a molecule of the structure **A – X – B**, wherein

B is a peptide of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake,

A is a peptide of about 2 to about 20 acidic amino acid residues, which when linked with peptide **B** is effective to inhibit or prevent cellular uptake of peptide **B**, and

X is a cleavable linker portion of between 1 and 10 amino acid residues joining **A** with **B**, which can be cleaved under physiological conditions.

52 (withdrawn): A nucleic acid encoding a molecule of the structure **A – X – B – C**, wherein

C is a peptide cargo moiety,

B is a peptide of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake,

A is a peptide of about 2 to about 20 acidic amino acid residues, which when linked with peptide **B** is effective to inhibit or prevent cellular uptake of peptide **B – C**, and

X is a cleavable linker portion of between 1 and 10 amino acid residues joining **A** with **B – C** which can be cleaved under physiological conditions.

53 (withdrawn): A molecule for transporting a fluorescent cargo moiety across a cell membrane of the structure **Q – A – X – B – C**, wherein

C is a portion comprising a fluorescent cargo moiety,

B is a peptide portion of about 5 to about 20 basic amino acid residues, which is suitable for cellular uptake, is covalently linked to portion **C**, and is effective to enhance transport of cargo portion **C** across a cell membrane,

Q is a quencher moiety attached to **A** and effective to quench fluorescence from fluorescent cargo **C**;

A is a peptide portion of about 2 to about 20 acidic amino acid residues, which when linked with portion **B** is effective to inhibit or prevent cellular uptake of **B – C**, and

X is a cleavable linker of about 2 to about 100 atoms joining **A** with **B – C**, which can be cleaved under physiological conditions.

54 -55 (canceled)

56 (original): The molecule of claim 11, comprising a single cargo portion **C** linked to a plurality of portions **B**, each of portions **B** being linked to a cleavable linker portion **X** linked to an acidic portion **A**.